WHAT IS CLAIMED IS:

1. An isolated and purified nucleic acid molecule that encodes protease T, and functional derivatives thereof.

2. The isolated and purified nucleic acid molecule of claim 1, having a nucleotide sequence selected from a group consisting of: (SEQ.ID.NO.:1), (SEQ.ID.NO.8) and functional derivatives thereof.

3. The isolated and purified nucleic acid molecule of claim 1, wherein said nucleic acid molecule is selected from a group consisting of cDNA, RNA, mRNA and genomic DNA.

4. An expression vector, wherein said vector contains a nucleic acid sequence encoding protease T protein, and functional derivatives thereof.

5. The expression vector of claim 4, wherein the nucleic acid sequence encoding protease T protein is selected from a group consisting of (SEQ.ID.NO.:1), (SEQ.ID.NO.:8), and functional derivatives thereof.

6. The expression vector of claim 4, wherein the nucleic acid sequence is selected from a group consisting of cDNA, RNA, and genomic DNA.

7. A recombinant host cell containing the expression vector of claim 4.

8. The recombinant host cell of claim 7, wherein said expression vector contains a nucleic acid sequence selected from a group consisting of (SEQ.ID.NO.:1), (SEQ.ID.NO.:8) and functional derivatives thereof.

9. The recombinant host cell of claim 7, wherein said nucleic acid sequence is selected from a group consisting of genomic DNA, RNA, and cDNA.

10. A protein in substantially pure form that functions as protease T protein.

11. The protein according to claim 10, having an amino acid sequence selected from a group consisting of (SEQ.ID.NO.:7), (SEQ.ID.NO.:9) and functional derivatives thereof.

12. A monospecific antibody immunologically reactive with protease T protein.

13. The antibody of Claim 12, wherein the antibody blocks protease activity of the protein.

14. A process for expression of protease T protein in a recombinant host cell, comprising:

(a) transferring the expression vector of Claim 4 into suitable host cells; and

(b) culturing the host cells of step (a) under conditions which allow expression of the protease T protein from the expression vector.

15. A method of identifying compounds that modulate protease T protein activity, comprising:

(a) combining a modulator of protease T protein activity, protease T protein, and a labeled substrate; and

(b) measuring a change in the labeled substrate.

16. The method of claim 15 wherein the labeled substrate is selected from a group consisting of flourogenic, colormetric, radiometric, and fluorescent resonance energy transfer (FRET).

17. A compound active in the method of Claim 15, wherein said compound is a modulator of protease T serine protease activity.

18. The compound of Claim 17, wherein said compound is an agonist or antagonist of protease T serine protease activity.

19. The compound of Claim 17, wherein said compound is a modulator of expression of protease T serine protein.

20. A method of treating a patient in need of such treatment for a condition that is mediated by protease T, comprising administration of the compound of Claim 17.

21. A kit comprising a nucleic acid sequence selected from a group consisting of SEQ.ID.NO.:1 and SEQ.ID.NO.:8, nucleic acid sequence that encodes protease T protein according to SEQ.ID.NO.:7, and fragments thereof.

22. A kit comprising the serine protease T protein selected from the group consisting of SEQ.ID.NO.:7 and SEQ.ID.NO.:9, and fragments or derivatives thereof.

23. A pharmaceutical composition comprising the protein of claim 10.

24. The pharmaceutical composition of claim 23 wherein said composition is a topical skin care composition.

25. A non-pharmaceutical composition comprising the protien of claim 10.

26. The non-pharmaceutical composition of claim 25 wherein the composition is selected from a group consisting of laundry detergent, shampoo, hard surface cleaning composition, and dishcare cleaning composition.

27. A method of treating an imbalance of desquamation comprising topical application of the composition of claim 24.